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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,927	07/10/2003	Louis B. Rosenberg	IMM053A	9912
34300 7590 12/11/2007 PATENT DEPARTMENT (51851) KILPATRICK STOCKTON LLP 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			EXAMINER LIANG, REGINA	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 12/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/615,927	Applicant(s) ROSENBERG ET AL.	
	Examiner Regina Liang	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/29/06, 10/18/04, 7/10/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. Claims 44-69 of this application conflict with claims 122-147 of Application No. 09/153,781. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 44-69 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 122-147 of copending Application No. 09/153,781. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 44-49, 52, 65-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierce et al (US 5,299,810).

As to claim 44, Figs. 1 and 2 of Pierce discloses an apparatus, comprising: a network interface (77, 78); a peripheral interface (62, 66, 68, 72, 90, 92); and a processor coupled (42, 44, 74, 76) to the network interface and the peripheral interface, the processor being associated with a first simulation of a virtual environment (space 48) including a first virtual object (58), the processor configured to receive from the network interface a signal associated with a second virtual object (60) within the virtual environment, the processor configured to send to the peripheral interface a signal associated with a haptic feedback based on a virtual interaction between the first virtual object and the second virtual object (col. 1, line 57 to col. 2, line 10; col. 5, lines 17-45; col. 9, lines 32 to 60 for example).

As to claim 45, Pierce discloses the processor is configured to receive from the peripheral interface a signal associated with a position of a manipulandum (“the computer 74 is electrically connected to the position sensors that are associated with the steering handle 62 and accelerator pedal 66. These sensors generate electrical control signals that are representative of the positions of the steering handle 62 and accelerator pedal 66. the electrical control signals are in turn conducted to the computer 74”), the processor is configured to send to the network interface a signal associated with the first virtual object based on the position of the manipulandum (col. 5, line 59 to col. 6, line 30).

As to claim 46, Pierce discloses the processor being a first processor (42, 74), wherein the signal associated with the haptic feedback is configured to compensate within the first simulation

for a delay between signals associated with the first virtual object and the signal associated with the second virtual object (col. 6, lines 31-56).

As to claim 47, Pierce discloses the processor being a first processor (42, 74), wherein: the virtual environment is defined by the first processor and a second processor (44, 76) in communication with the first processor over a network (77, 78), the first processor defining the first simulation of the virtual environment (48, 52), the second processor defining a second simulation of the virtual environment (48, 50), the first simulation substantially corresponding to the second simulation (col. 5, line 59 to col. 6, line 56).

As to claim 48, Pierce discloses the processor being a first processor, the signal associated with the haptic feedback being a first signal, the apparatus further comprising: a manipulandum (the position sensor s of 62, 66, 68, 72, 90, 92); an actuator (80-83) coupled to the manipulandum; and a second processor coupled to the actuator and the peripheral interface, the second processor configured to receive the first signal from the peripheral interface, the second processor configured to send a second signal to the actuator based on the first signal, the actuator configured to provide haptic feedback based on the second signal (col. 6, line 50 to col. 7, line 39 for example).

As to claim 49, Pierce discloses the processor being a first processor, the apparatus further comprising: a manipulandum having at least one degree of freedom (inherent the position sensor of the steering handle 62 having at least one degree of freedom); an actuator (80-83) coupled to the manipulandum; a sensor configured to detect a position of the manipulandum in the at least one degree of freedom; and a second processor (44, 76) coupled to the sensor and the peripheral interface (68, 72), the second processor configured to send a position signal to the

peripheral interface based on the position of the manipulandum, the first processor configured to send to the network interface a signal associated with the first virtual object based on the position signal (col. 5, line 59 to col. 6, line 30 for example).

As to claim 52, Pierce discloses the signal associated with the haptic feedback includes a positional offset (image 114), the positional offset being associated with a difference between the first virtual object and the second virtual object within the first simulation (col. 9, lines 46-60 for example).

As to claim 65 Pierce discloses the method, comprising: enabling a first simulation of a virtual environment on a first processor (Fig. 2, 42, 74) and a second simulation of the virtual environment on a second processor (42, 76), the first processor being in communication with a haptic feedback device (26), the second processor being in communication with a haptic feedback device (28); enabling the first processor to provide a signal to its haptic feedback device based on an interaction between a first virtual object and a second virtual object within the first simulation, the interaction within the first simulation being based on a position signal from the haptic feedback device of the first processor and a signal associated with the second virtual object from the second processor; and enabling the second processor to provide a signal to its haptic feedback device based on an interaction between the first virtual object and the second virtual object within the second simulation, the interaction within the second simulation being based on a position signal from the haptic feedback device of the second processor and a signal associated with the first virtual object from the first processor (col. 1, line 57 to col. 2, line 10; col. 5, lines 17-45; col. 9, lines 32 to 60 for example).

As to claim 66, Pierce disclose comprising: enabling synchronization between the first simulation and the second simulation based, at least in part, on the signal to the haptic feedback device of the first processor and the signal to the haptic feedback device of the second processor (col. 6, line 50 to col. 7, line 39 for example).

As to claim 67 Pierce discloses the first processor is a first video-gaming console (12, 42, 62, 66, 74, 90), the haptic feedback device (26) associated with the first processor is a first controller; and the second processor is a second video-gaming console (14, 44, 68, 72, 76, 92), the haptic feedback device (28) associated with the second processor is a second controller.

As to claim 68, Pierce discloses the first controller includes a manipulandum (62, 66, 90), the position signal from the first controller being based on a position of the manipulandum of first controller; and the second controller includes a manipulandum (68, 72, 92), the position signal from the second controller being based on a position of the manipulandum of first controller.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of Thacher et al (US. 5,917,725).

As to claim 50, Pierce differs from the claim in that the network interface is not at least one of an Ethernet connection and a modem connection. However, Thacher is cited to teach using one least one of an Ethernet connection and a modem connection as a network interface for providing communication between a plurality of game devices (col. 5, lines 58-57, col. 11, lines 60-65 for example). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the network interface of Pierce to be at least one of Ethernet connection and a modem connection as taught by Thacher so as to provide large scale game playing with very diverse player locations (col. 1, lines 52-53 of Thacher).

8. Claims 51, 53-64, 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (5,299,810) in view of Ouhyoung et al. ("A low-Cost Force Feedback Joystick and its use in PC Video Games", IEEE Transactions on Consumer Electronics, Vol 41. No. 3, AUGUST 1995 pages 787-794) and Kelley et al. ("MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device).

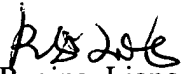
As to claims 51, 53, 59, 69, Pierce discloses the apparatus and method as claimed except for a local processor coupled to the actuator and the sensor. Ouhyoung teaches a local controller with the above claim features in figures 3b and 3c and note also used in a PC Video Game. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pierce's device to have the local processor as taught by Ouhyoung because Kelley et al on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

As to claims 54-58, 60-64, the combination of Pierce, Ouhyoung and Kelly teaches all the limitation as claimed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Regina Liang
Primary Examiner
Art Unit 2674

12/6/07